## Title 7 DNREC 100 Office of the Secretary

## 100 Office of the Secretary

## 104 Regulations for the Green Energy Program

## 1.0 Purpose

The purpose of this regulation is to prescribe procedures relating to the Green Energy Fund pursuant to 29 **Del.C**. Chapter 80, Subchapter 2, the Delaware Energy Act. It is the goal in establishing this regulation to provide a streamlined procedure for distributing Green Energy Funds through the use of grants and loans.

This regulation provides rules of practice and procedure for application and disbursement of Green Energy Fund grants and loans for renewable energy projects and encouraging energy efficiency in Delaware.

## 2.0 Statutory Authority

26 Delaware Code Section 1014 provides the authority for establishment of the Green Energy Fund These regulations are promulgated under authority of 29 Delaware Code, Section 8057(b)

#### 3.0 Definitions

For purposes of this regulation, the following words and phrases shall have the meanings set forth below.

"Applicant" means persons in Delaware receiving services from DP&L, or its successor, after the adoption of a restructuring plan pursuant to § 1005(a) of Title 26; and Persons in Delaware receiving services from a nonregulated electric supplier which is contributing to the Green Energy Fund.

"Appropriate education" means training that the Department designates as acceptable for complying with section 5.6.2 of this regulation. In most cases it must include specific hands on installation training for the contractor.

"Department" means the Department of Natural Resources and Environmental Control, the Delaware Energy Office, or such other agents as the department or Secretary may designate.\_\_",DP&L" means the trade name used by Delmarva Power and Light Company.

Formatted: Font: Not Bold

Deleted: 1
Deleted: c

Deleted: .

Deleted: ¶

Formatted: Font: (Default) Arial

Formatted: section-para, Indent: Left: 0.17"

Formatted: Font: Not Bold, Font color: Auto

Formatted: section-para, Indent: Left: 0.17"

Deleted: ¶

Deleted: Conectiv

Deleted: Power Delivery DP&L

"DP&L Service Territory" means the service territory of Delmarva Power and Light Company, or its successor, as such territory is reflected in the electric service territory maps maintained by the Delaware Public Service Commission under the authority of 26 Del.C. §203B

"Energy Efficiency Improvement" means an increase in productivity or output for a given energy input when compared to conventional technologies or practices. Energy efficiency improvements may include equipment replacement, installation of controls, changes in operating practices, or other measures.

"Energy Efficiency Information Program" or "Information Program" means a program established mainly to educate or inform energy consumers about the environmental and economic benefits of energy efficiency improvements. Energy efficiency information programs may include the demonstration of new technologies or the novel application of existing technologies in order to establish their environmental and economic benefits.

"Energy Efficiency Technology" means a hardware device or system that provides an end-use energy service (e.g., lighting, heating, air conditioning, motion, etc.) using less energy per unit of output than minimum standards allow or available conventional equipment.

<u>"Farmlands"</u> as defined by 9 **Del.C.** §902 currently of "agricultural use" as defined by 9 **Del.C.** §902 in the DP&L Service Territory will be considered under the commercial / nonresidential program.

"Fiscal Year" means the budget and accounting year of the State beginning on July 1 and ending on June 30. Reference to a Fiscal Year by year number means the Fiscal Year ending on June 30 of the named year. For example, a reference to Fiscal Year 2004 means the period beginning on July 1, 2003 and ending on June 30, 2004.

"Freeze Tolerance Limit" means the temperature below which a Qualifying System for Solar Water Heating might suffer damage attributable to freezing.

**"Fuel Cell"** is an electrochemical energy conversion device which converts the chemical energy from a fuel directly into electricity and heat.

"Geothermal Heat Pump" means either an open or closed loop system or direct expansion system that uses the thermal energy of the ground or groundwater as the heat source and heat sink for residential or non-residential space heating and/or cooling. It may provide both space heating and cooling, cooling only or heating only functions. A closed loop system consists of a ground heat exchanger in which the heat transfer fluid is permanently contained in a closed system. An open loop system consists of a ground heat

Formatted: body, No bullets or numbering

Formatted: Font: Not Bold

exchanger in which the heat transfer fluid is part of a larger environment. A direct expansion system consists of a geothermal heat pump system in which the refrigerant is circulated in pipes buried in the ground, rather than using a heat transfer fluid, such as water or antifreeze solution in a separate closed loop, and fluid to refrigerant heat exchanger.

"Green Energy Fund" means the fund established by 29 Del.C. §8057 and administered by the Department.

"Grid-connected", "Grid-tied" or "Interconnected" means a condition in which a Qualifying System that is an electrical generating system serves and is electrically connected to an electrical load that is also connected to and served by the local utility electrical grid. The delivery or ability to deliver, any portion of the generating capacity into the utility electrical grid is not required, nor must the loads served be only alternating current (AC) loads. Systems need only to be capable of serving electrical loads that would otherwise be served by the local utility.

"Ground mount" means a solar electrical or solar water heating system that is mounted on the ground fixed to a pole and rack system instead of on a roof. Solar Electric and solar water heating systems mounted on any enclosure or non-pole mounted and rack system will be considered a roof mounted solar system.

"Industry Recognized Training" - Reserved

"Kilowatt" means the basic unit of electric power equal to 1,000 Watts.

**"Kilowatt-hour"** means the basic unit of electric energy equal to one Kilowatt of power supplied to or taken from an electric circuit steadily for one hour. One-Kilowatt hour equals 1,000 Watt-hours. Electric energy is commonly sold by the Kilowatt-hour.

"Nonresidential" means all classes of customer purchasing electric power for uses other than for individual households. These groups of customers generally purchase electric power for commercial and industrial purposes. When used as an adjective with respect to Qualified Systems or Green Energy Program Grants or Loans, such term refers to systems owned by, or leased to, or grants or loans awarded to Nonresidential persons.

"Participating Contractor" is an appropriately Delaware licensed contractor who has submitted to the Department an application designated by the Department with all required attachments and maintains in full force all required insurance and warranties as described in Section 5.2.

Formatted: Font: Not Bold

Formatted: Font: Not Bold

Formatted: Font: Not Bold

"Passive Solar Design" means a residential or non-residential building design that uses no external mechanical power, such as pumps or blowers, to collect and move solar heat.

"Photovoltaic" means an electronic semiconductor device, most commonly made of silicon that produces direct current DC) electricity from sunlight.

"Placed in Service" means installed, operational, and producing output.

"Professional Engineer" means "engineer", as defined in Title 24 Del.C., Chapter 28, *Professional Engineers*, namely, a person who by reason of his or her advanced knowledge of mathematics and the physical sciences, acquired by professional education and practical experience, is technically and legally qualified to practice Professional Engineering, and who is licensed by the Delaware Association of Professional Engineers.

"PTC" refers to PVUSA Test Conditions, which were developed to test and compare PV systems as part of the PVUSA (Photovoltaics for Utility Scale Applications) project. PTC are 1,000 Watts per square meter solar irradiance, 20 degrees C air temperature, and wind speed of 1 meter per second at 10 meters above ground level. PV manufacturers use Standard Test Conditions, or STC, to rate their PV products. STC are 1,000 Watts per square meter solar irradiance, 25 degrees C cell temperature, air mass equal to 1.5, and ASTM G173-03 standard spectrum. The PTC rating, which is lower than the STC rating, is generally recognized as a more realistic measure of PV output because the test conditions better reflect "real-world" solar and climatic conditions, compared to the STC rating.

"Purchaser" means the purchaser of a Qualifying System.

"Qualifying System" has the meaning as set forth in Section 5.0.

"Renewable Energy Technology" shall have the meaning as prescribed in 29 Del.C. Chapter 80.

"Renewable Fuel" means a non-nuclear fuel that can be derived from nonfossil energy sources that are naturally replenishing and virtually inexhaustible.

"Residential" means the class or classes of customers purchasing electric power for household uses. When used as an adjective with respect to Qualified Systems or Green Energy Program Grants, such term refers to systems owned by, or leased to, or grants awarded to Residential persons.

"Retailer" means the vendor or lessor of a Qualifying System.

Deleted: (de

Formatted: Font: Arial, 12 pt

Deleted: ¶

Deleted: or lessee

- "Secretary" means the Secretary of the Department of Natural Resources and Environmental Control.
- "Solar PathfinderTM" is a non-electronic instrument that measures the annual solar potential for a given site.
- "Solar Shade Analysis" means an on site evaluation using a Solar Pathfinder™ or functionally equivalent device that measures the annual solar potential for the given site.
- "Solar Water Heating" means the heating of water by use of the sun's energy rather than electricity or gas or some other means.
- "State" means the State of Delaware.
- "Ton of Capacity" means 12,000 British Thermal Units (BTU) per hour of cooling capacity.
- "Watt" means the basic unit of measure of real electric power, or rate of doing work.
- "Watt-hour" means the basic unit of measure of electric energy consumption. The total amount of energy used in one hour by a device that requires one Watt of power for continuous operation.
- "Wind Turbine" means a mechanical/electrical system that converts the kinetic energy of blowing wind into mechanical or electric power.

## 4.0 Green Energy Fund

The Delaware 142nd General Assembly enacted and Governor Minner signed into law Senate Bills 93 and 145, which amended Title 29 of the **Delaware Code** to include new provisions for utilizing the Green Energy Fund. The law was further amended by the Delaware 143<sup>rd</sup> and Delaware 144th General Assembly. The law continues to encourage and promote the use of renewable electric generation technologies, alternate energy technologies, and energy efficiency, by residential and non-residential (commercial) customers. Further, the law amends §8057, by dividing the Green Energy Fund into three separate and distinct programs.

The programs outlined in §8057, are described in full in this regulation and include the following:

Green Energy Endowment Program

Formatted: Superscript

Deleted: 4(d)

Deleted: 4(d)

- Technology Demonstration Program
- Research and Development Program

#### 5.0 Green Energy Endowment Program

#### 5.1 General Provisions

All grants made under the Green Energy Endowment Program are on a first-come first-served basis. Allowable expenditures under the Green Energy Endowment Program shall not exceed sixty-five percent (65%) of the total revenue collected during the previous fiscal year or sixty-five percent (65%) or the total fund whichever is greater, including energy efficiency education programs. Energy efficiency education programs shall not exceed thirty percent (30%) of allowable Green Energy Endowment Program expenditures. Under no circumstances will the Department issue grants for land acquisition in association with any project proposed in the Green Energy Endowment Program.

Of the total funds available through Green Energy Endowment Program on an annual basis, the grants made for residential projects shall not exceed 40% of the total funds available and the non-residential grants shall not exceed 60% of the total funds available, including energy efficiency programs.

Up to 7.5% of the moneys deposited in the Green Energy Fund each year be used for administration of the Fund, and an additional 2.5% of the may be used for outreach activities including marketing, advertising and workshops.

## 5.2 Eligibility

The Delaware Green Energy Program is available to DP&L electric customers or persons in Delaware receiving services from a non-regulated electric supplier which is contributing to the Green Energy Fund <a href="https://doi.org/10.25/10.25/">https://doi.org/10.25/</a> Applicants requesting grants for non-grid-tied solar electric and wind systems must show proof of services from a non-regulated electric supplier which is contributing to the Green Energy Fund. Grant applicants will be eligible for a lifetime maximum total benefit per property of up to a total of \$31,500 for residential and \$250,000 for nonresidential. All eligible equipment and products must be installed in Delaware. Energy Efficiency Programs must be implemented in Delaware for the primary benefit of DP&L customers, or persons in Delaware receiving services from a non-regulated electric supplier which is contributing to the Green Energy Fund.

Deleted: ¶

**Deleted:** Up to seven and one-half percent (7.5%) of the moneys deposited in the Green Energy Fund each year may be used for administration of the Fund.

Deleted: ¶

Formatted: Font color: Auto

## 5.3 Renewable Energy Grant Approval Request

Customers and contractors applying for any grant for a renewable energy project must provide the following information to the Department prior to installing the system. Renewable Energy systems where field installations have commenced prior to receiving a grant approval will not be considered eligible for funding.

- 5.3.1 Completed Grant <u>Request Form signed by both customer and</u> contractor
- 5.3.2 The type of qualifying system
- 5.3.3 Copy of project estimate, purchase order, or letter of intent. This must include: Estimate total cost, Itemized list of major system components with copies of product specification sheets and costs, Labor Cost, Permits and Fees Cost, System Size (KW for PV and Wind, Square-feet and Gallons Solar Water Heating, Tons for Geothermal), and state the (5) year parts and labor, warranty.
- 5.3.4 Copy of the applicant recent <u>DP&L</u> electric bill.
- The Electric Bill must be from the last three months of installation address in service in Delaware.
- New construction must show documentation from the utility that the
  installation location with be part of their service territory. This can be
  accomplished by submitting a letter from the utility stating the installation
  address is part of that utility's electric grid or supplying documentation with
  control numbers for the property from the utility.
- 5.3.5 System Schematic Photovoltaic (PV) and Wind Turbine Grants require wiring diagrams, Solar Water Heating (SWH) System Grants require plumbing diagrams. Diagram must be site specific.
  5.3.6 Plot plan
- Grount Mounted PV, SWH and Wind diagrams must show how the equipment will appear onsite in relation to distance from other structures,
- Grount Mounted PV and SWH diagrams must show the mounting surface orientation, slope, length, width, and the location of any possible shad structures.
- Geothermal diagrams must show well / loop locations and loop lines going in the structure.
- Roof Mounted PV, SWH and Wind diagrams are required for all roof installed renewable energy technologies illustrating the following the orientation, slope, length, width, and the location of any possible shad structures.

Deleted: Reservation	
Deleted: :	
Deleted: Reservation	
Formatted	(
Formatted	(
Formatted	<u></u>
Formatted	(
Formatted	<u></u>
Deleted: ¶	
Formatted	(
Formatted	(
Deleted: customer's	
Deleted: Conectiv	
Formatted	<u></u>
<b>Deleted:</b> Power Delivery	
<b>Deleted:</b> or a bill from a non-regulated electric	
Formatted	(
Formatted	
Formatted	(
Deleted: ¶	
Formatted	(
Formatted	(
Formatted	(
Formatted	<u></u>
Formatted	(
Formatted	

- The Department will issue the final decision of whether a system is to be considered a ground mounted or roof mounted system
- Areas of shading (Provide Solar Pathfinder results for all cases where shading occurs between 9:00 a.m. and 3:00 p.m. Results of the solar shade analysis must determine that 70% of the annual solar path's area is shade free to be considered for a grant.) All solar electric and solar water heating systems will be required to submit Solar Pathfinder or equivalent results.
- Wind turbine installation diagrams will detail wind resource infringement areas including but not limited to buildings and trees.

## 5.3.7 Manual J calculation (geothermal only)

- A Manual J Calculation or equivalent, is required to determine the correct size requirements for a geothermal system
- Manual J Calculations or equivalent are required for all installations including replacements.
- 5.3.8 Detailed system design and a predicted performance calculation verified by a Professional Engineer. The professional engineer should not be affiliated with the product manufacturer but knowledgeable and competent in evaluating the product to be installed. (Non-residential solar water heating systems only.)
- 5.3.9 Copy of completed and approval of (Page 1) of the DP&L Interconnection Agreement (photovoltaic, wind, fuel cell)
- 5.3.10 Copy of electrical, plumbing or building permit (It is the responsibility of the customer and contractor to provide this permit if by code, statute or policy it is required)

5.4 Evaluation of Renewable Energy Grant Approval Request

Upon receipt of the Grant Approval Request and supporting documents, the Department will perform an evaluation to check the proposal package for its compliance with the requirements noted above. If the proposal package is complete, the Department will process the Grant approval and issue a Confirmation and Claim Form to the applicant. All requirements as outlined in Section 5.3 must be provided to the Department prior to processing the

Formatted: body-l3, Bulleted + Level: 1 + Aligned at: 0.25" + Indent at: 0.5", Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

Formatted: Font color: Black

**Deleted:** illustrating well, turbine, or module location (wind and geothermal only, photovoltaic when system is ground mounted)

Formatted: Font: (Default) Arial, 12 pt

Formatted: Bulleted + Level: 1 + Aligned at:

0.25" + Indent at: 0.5"

Formatted: Font: (Default) Arial

Formatted: Font: (Default) Arial, 12 pt
Formatted: Font: (Default) Arial, 12 pt

**Formatted:** Normal, Bulleted + Level: 1 + Aligned at: 0.25" + Indent at: 0.5", Don't adjust space between Latin and Asian text, Don't adjust space between Asian text and numbers

Formatted: Font: (Default) Arial

Formatted: Font: (Default) Arial, 12 pt

Formatted: Font: (Default) Arial

Deleted:

**Deleted:** Roof diagram illustrating the following:¶

following:¶ 5.3.9.1 Roof dimensions (angle, length and

width)¶

5.3.9.2 Location of collectors or modules on roof¶
5.3.9.3 Location of any roof-mounted or building-mounted equipment¶
5.3.9.4 Orientation and Tilt of array or collectors¶
5.3.9.5 Areas of shading (Provide Solar

Pathfinder results for all cases where shading occurs between 9:00 a.m. and 3:00 p.m. Results of the solar shade analysis must determine that 70% of the annual solar path's area is shade free to be considered for a grant.)

Formatted: Font color: Black

Formatted: body-l2

Deleted: Reservation

Deleted: Reservation

Deleted: Reservation

grant approval. If all documents are not provided the grant request may be delayed.

The Department will provide and initial approve, offunds for the project described in the Grant Approval Request for six (6) months from the date on the Confirmation and Claim Form for residential applicants and twelve (12) months from the date on the Confirmation and Claim Form for nonresidential applicants. Grant requests will be reviewed and approved on a first come-first served basis, viable projects that are not completed within the required time must resubmit a new Grant Approval Request. The original request will become void after the initial approval period. If it becomes necessary to alter the initial proposal submitted to the Department, it is the responsibility of the contractor and customer to provide in writing a detailed explanation of changes to the Department prior to submission of the confirmation and claim form. The Department will review the written changes and may approve the changes and alter the grant amount if necessary. An automatic approval of the submitted changes should not be expected. Proceeding forward with an installation that differs from the submitted proposal could result in either a denial of the grant or a reduced grant amount.

5.5 Claim for and Distribution of Green Energy Program Renewable Energy Grants

After installation, the customer and contractor must provide the following to the Department:

5.5.1 Completed Confirmation and Claim form signed by customer and contractor

5.5.2 Copy of electrical, plumbing or building <u>final</u> inspection <u>(It is the responsibility of the customer and contractor to provide any final inspection approval documents if by code, statute or policy it is required)</u>

5.5.3 Copy of completed and approved <a href="Page 2">Page 2</a> DP&L Interconnection Agreement (photovoltaic, wind, fuel cell) or similar document from a non-regulated electric supplier which is contributing to the Green Energy Fund

5.5.4

5.5.5 Copy of final sales invoice <u>must include: final paid Costs, Itemized list of installed major system components and costs, Labor Cost, Permits and Fees Cost, System Size (KW for PV and Wind, Square-feet and Gallons</u>

**Deleted:** reservation

Deleted: reserve

Deleted: the

Deleted: Reservation

Deleted:

**Deleted:** of the reservation

**Deleted:** of reservation **Deleted:** Since all

Deleted: grants are reserved

Deleted:

**Deleted:** will be placed at the end of the queue and issued an extension of six (6) months from the date of the expired reservation for residential applicants and twelve (12) months from the date of expired reservation for non-residential applicants. To be considered of a reservation extension, the Department will require a project status and summary in writing fourteen (14) business days prior to the expiration of the original reservation.

**Deleted:** Copy of product specification sheets

Formatted: Font: 12 pt

Formatted: Font: (Default) Arial, 12 pt

Solar Water Heating, must show paid in full and method of payment, Tons for Geothermal), state the (5) year parts and labor warranty.

5.5.6 Copy of warranty agreement

All qualifying systems receiving a Green Energy Program grant must
have a full 5-year warranty against component failure, malfunction
and premature output degradation. The warranty must cover all
components for which the program incentive is granted and cover the
full cost of repair and replacement of all components of the system.
For professionally installed systems, the warranty must cover the
labor to remove and replace defective components and systems.

**Deleted:** (invoice must include actual price paid, itemized list of components, labor, permit fees, method of payment)

Formatted: Font: (Default) Arial, 12 pt

**Formatted:** Bulleted + Level: 1 + Aligned at: 0.59" + Indent at: 0.84"

5.5.8 Copy of the Owner's manual – A contractors is required to provide each Program participant with an owner's manual. At a minimum, the owner's manual shall include the following:

5.5.8.1 Name and address of the seller

5.5.8.2 System model name or number

5.5.8.3 Identification and explanation of system components

5.5.8.4 Description of system operation

5.5.8.5 Description of system maintenance

5.5.8.6 Description of emergency procedures

5.5.8.7 Vacation procedures

5.5.8.8 Systems warranty

5.5.8.9 Copy of plot diagram

5.5.8.10 Conspicuous notation that the owner's manual should be passed on to any new owners of the system during the operating life of the system.

Upon receipt of the completed <u>Confirmation and</u> Claim Form and all final documentation pertaining to the project as noted in Section 5.5 5.5.8, the Department will evaluate the <u>Confirmation</u> and Claim Form and the required accompanying documents for consideration of <u>final</u> grant approval. <u>In the</u> event funds cannot be paid immediate each completed grant package will be

**Deleted:** 5.5.7 Copy of verification of completion of installation signed by customer and contractor.

Formatted: body-l2

Formatted: body-I3

Formatted: Font color: Black

Deleted: Reservation

Deleted: 1 Deleted: 6

**Deleted:** Reservation

placed in queue for funds. As new funds are collected the next complete package awaiting funds in queue will be paid. Only full grant payments will be paid not partial payments will be paid for queued packages. The contractor and customer are fully responsible for insuring that all forms and documentation have been supplied and the system meets all program requirements. The Department may make an inspection of the systems prior to final grant approval.

The Department will acknowledge receipt of the final documentation for grant award in a reasonable period of time, generally within 30 days of receipt. The Department will ordinarily process the payment to the applicant, however, if the applicant so requests in writing and documentation reflects the installation cost to the purchaser, was reduced directly from the purchase price, the Department will process the payment to the retailer, installing contractor, or purchaser.

Upon availability of funds and written request, the Department will pay the grant in two installments. Twenty-five percent 25% of the grant paid after the equipment is delivered to the installation site and all required permits, approvals, certifications from all jurisdictions having authority are secured. The remaining twenty-five percent is paid when the system is operational and approved by the utility and/or appropriate inspection agent. The Department reserves the right to review any installation prior to any partial or final grant payment. The Department reserves the right to enact or suspend this option at anytime.

5.6 Green Energy Program Renewable Energy Project Participating Contractor Guidelines & Self Installation Guidelines.

## 5.6.1 Participating Contractor Application

Contractors installing qualifying photovoltaic, solar water heating, geothermal heat pumps, small wind turbines, or fuel cells must complete the Participating Contractor Application prior to installing systems within the Green Energy Program. The application will consist of the following:

- 5.6.1.1 Name of company and key contact information
- 5.6.1.2 Brief history and organizational structure of company
- 5.6.1.3 Education, experience and licensure
- 5.6.1.4 General liability and statutory worker's compensation
- 5.6.1.5 Statement of reliability and good standing

Deleted: process the

**Deleted:** of the Reservation and Claim Form and all supporting documentation.

**Deleted:** purchaser **Deleted:** purchaser

**Deleted:** grant value

Deleted: or

#### 5.6.2 Education and Licensure

Participating Contractors shall maintain appropriate education and licenses to insure that only professionally designed systems are installed within the Program. The contractor must maintain on staff field personal that have received appropriate training for the installation of that particular renewable energy system. Each contractor must submit annually a list of personal on staff that has received the appropriate training to qualify them to conduct the installation of renewable energy systems. The Participating Contractor must be licensed in the State of Delaware. Copies of all renewed licenses must be submitted to the Department within 60 days of expiration. If all new licenses are not provided, the contractor will be suspended from participation with the Green Energy Program until a new license is provided. All installations performed during the suspension will not be eligible for funds until the suspension is lifted.

Where industry certification programs have been promulgated, grant recipients will be required to obtain, the highest industry recognized training within three (3) years of becoming an approved contractor.

Thereafter the contractor must continue to become certified in the highest industry recognized training every three (3) years.. If a new certificate is not provided, the contractor will be suspended from participation with the Green Energy Program until a new certificate is provided. All installations performed during the suspension will not be eligible for funds until the suspension is lifted.

## 5.6.3 Insurance Requirements

The Participating Contractor and anyone acting under its direction or control or on its behalf shall at its own expense procure and maintain in full force at all times Commercial General Liability Insurance with a bodily injury and property damage combined single limit of liability of at least ONE MILLION DOLLARS (\$1,000,000) for any occurrence. Contractors must also provide within 60 days of expiration a new insurance certificate meeting the Insurance Requirements to the Department. If a new insurance certificate is not provided, the contractor may be suspended from participation with the Green Energy Program until a new certificate is provided. All installations performed during the suspension will not be eligible for funds until the suspension is lifted.

## 5.6.4 Statement of Reliability and Good Standing

Contractor must be reliable and in good standing with a "Satisfactory Record" (or no negative reports) with the Better Business Bureau. The Contractor shall provide a copy of their Better Business Bureau report to

Deleted: are encouraged

Deleted: to

Deleted: use

Deleted: certified

Deleted:

Deleted: contractors.

Formatted: Font color: Black

the Department upon request. Reports may be obtained at the following address.

**BBB** of Delaware

1415 Foulk Road, Suite 202

Foulkstone Plaza

Wilmington, DE 19803

Phone: (302)230-0108

Fax: (302)230-0116

Web Site: www.delaware.bbb.org

E-mail: info@delaware.bbb.org

5.6.5 Limitation of Funds

The Program funds are limited. The Participating Contractor shall follow program guidelines to insure approval of funds prior to installing a qualifying system. The contractor will also inform their existing customers of any and all changes to the Green Energy Program within (14) days of programmatic changes. If it is found that contractors are using unethical tactics to sell renewable energy systems based on false information about the Green Energy Program the Department may impose sanctions up to and including suspension as a participating contractor.

## 5.6.6 Self Installations

Green Energy Funds may be awarded to applicants that choose to act as the general contractor (self installation) for the installation of their renewable energy system. The following details the requirements for self installations.

5.6.6.1 Applicants must supply the same documentation for a grant request as Section 5.3.-5.5.

5.6.6.2 Applicants may not submit any labor charges for the installation. This includes any subcontracted work. Applicants will only be eligible for the material costs and associated installation equipment (e.g. mechanical lifts) associated with the installation.

**Deleted:** reservation

5.6.6.3 Applicants must submit a signed warranty statement by the applicant stating that the workmanship is self warranted for 5 years. The applicant must also submit the product warranties showing coverage for at least 5 years on the major components (e.g. solar panels).

5.6.6.4 Applicants will also adhere to all Renewable Energy Project Code Compliances in section 5.8.

## 5.7 Participating Contractor Violation Sanctions

5.7.1 Over time it may become necessary to sanction or remove contractors from the Green Energy Program Contractor list. The Department reserves the right to remove a contractor or place sanctions on a contractor. The following will dictate the more common reasons for removal from the Green Energy Program Contractor List:

5.7.1.1 Contractor has not submitted at least (1) Green Energy Program grant application in (1) calendar year. The reason for removal in this situation is to maintain an accurate list of contractor's activity promoting and installing renewable energy systems in Delaware.

5.7.1.2 Contractor has not submitted required documents including but not limited to renewed business licenses, renewed insurance certificates, upgraded training certificates, and other relevant licenses required by the State, County or Municipality to install renewable energy systems in Delaware.

5.7.1.3 The Department receives poor workmanship evaluations from contractor customers.

5.7.1.4 The Department has found evidence that a contractor is found operating their business in an unethical manner

5.7.2 Contractors that are found to be in violation of the Green Energy Program regulations will face the following consequences.

<u>5.7.2.1 First Violation – Verbal and Written Warning detailing the alleged offence</u>

5.7.2.3 Second Violation – Suspension from participating in the Green Energy Program for six (6) Months and removal from the Green Energy Program Contractor list. Any renewable energy system installed during the suspension will not be eliqible for a Green Energy Program grant.

# **Deleted:** 5.6.6 Owner's Manual Minimum Requirements¶

Contractors are required to provide each Program participant with an owner's manual. At a minimum, the owner's manual shall include the followino:¶

5.6.6.1 Name and address of the seller¶

5.6.6.2 System model name or number¶

5.6.6.3 Identification and explanation of system components¶

5.6.6.4 Description of system operation¶

5.6.6.5 Description of system maintenance¶
5.6.6.6 Description of emergency procedures¶

5.6.6.7 Vacation procedures¶

5.6.6.8 Systems warranty¶

**Deleted:** Renewable Energy Project Warranty

Formatted: Indent: Left: 0.67"

Formatted: Indent: Left: 0"

Formatted: Indent: Left: 0.5"

5.7.2.4 Third Violation — Suspension from participating in the Green Energy Program for (5) years. The owners and employees of the offending company will be removed from the Green Energy Program Contractor list. If the owner(s) or employees of the offending company choose to start another company or join another approved company then new company will be considered in violation and face the remainder of the offender's suspension.

5.7.3 Contractors found in any stage of violation may appeal the decision to the State Energy Coordinator. The appeal must be in writing and must be submitted to the State Energy Coordinator within 30 days of receipt of offence notification. Beyond the State Energy Coordinator the contractor may appeal to through the normal Department appeals process.

5.8 Renewable Energy Project Code Compliance

All qualifying systems must be installed in accordance with the standards and specifications of the manufacturers of the components in the system, in compliance with all applicable local electric and building codes, local ordinances and these guidelines. Where discrepancies, if any, exist with these guidelines and local codes, local codes shall govern.

5.9 Green Energy Program Renewable Energy Technologies

Renewable energy project equipment must meet the standards described in Section 5.9:

5.9.1 Photovoltaic Systems

5.9.1.1 Grant Limits

Subject to availability of funds, the Delaware Green Energy Program offers grants for grid-connected photovoltaic systems installed by qualified contractors and customers up to 25% of the total installed costs. Qualifying State, County, Municipal and 501(c)3 entities will have opportunities to receive up to 35% grants in lieu of their abilities to capitalize on Federal tax credits. Grants will not exceed \$31,500 per residential dwelling for residential systems and \$250,000 per non-residential facility for non-residential systems. A photovoltaic system may not have eligible qualifying photovoltaic system costs in excess of \$8.00 per PTC Watt. If a system is found to be in excess of \$8.00 per watt the grant value will be totaled by multiplying the installed PTC wattage by \$8.00. The resulting cost will be considered the upper limit of cost eligibility for the project and then 25% multiplier will be applied to that amount in lieu of the provided proposal or final invoice cost. Applicants may apply

**Deleted:** All qualifying systems receiving a Green Energy Program grant must have a full 5-year warranty against component failure, malfunction and premature output degradation. The warranty must cover all components for which the program incentive is granted and cover the full cost of repair and replacement of all components of the system. For professionally installed systems, the warranty must cover the labor to remove and replace defective components and systems.¶

Formatted: Font: (Default) Arial, 12 pt

Formatted: Indent: Left: 0.25", No bullets or numbering

Deleted: 50

Formatted: Font: (Default) Arial, 12 pt

Deleted: 22

Deleted:

Formatted: Font: (Default) Arial, 12 pt

Deleted: 12

Formatted: Font: (Default) Arial, 12 pt

multiple times for the same renewable energy system if each time the system is expanded in size. The GEP will fund expansions up to the total allowable fund limits per the customer's designation as either a residence or non-residence.

Formatted: Font: (Default) Arial, 12 pt

#### 5.9.1.2 Accepted Products and Equipment

## 5.9.1.2.1 Grid Interconnected

All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of the most recent version of Underwriters Laboratory Standard 1703. The Department may also choose to use the List of Eligible SB1 Guidelines Compliant Photovoltaic Modules as approved by the State of California. http://www.gosolarcalifornia.ca.gov/equipment/pymodule.html.

All qualifying grid-connected systems must comply with the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 929, Recommended Practice for Utility Interface of Photovoltaic (PV) Systems, IEEE 1547, Standard for Interconnecting Distributed Resources with the Electric Power Systems and the appropriate generation interconnection requirements of DP&L's Technical Considerations Covering Parallel Operations of Customer Owned Generation of Less than 2 Megawatt and Interconnected with the DP&L Power Delivery System or similar interconnection requirements from a non-regulated electric supplier which is contributing to the Green Energy Fund.

All inverters must be certified by a nationally recognized testing laboratory for safe operation and be certified as meeting the requirements of Underwriters Laboratory Standards 1741, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems. The Department may also choose to use the List of Eligible Inverters as approved by the State of California. http://www.gosolarcalifornia.ca.gov/equipment/inverter.php

All grid interconnected systems must be designed and installed to comply with the National Electric Code (NEC).

The installed system must meet a minimum collective array size of 500 watts.

Formatted: Font: (Default) Arial, 12 pt, Not

Formatted: Indent: First line: 0.5"

Deleted: 1

Battery Backup is not an eligible cost for Green Energy Program funds. Battery Backup components ineligible include but are not limited to: batteries, battery specific inverters, extra wiring for batteries and inverters for batteries and any battery housing.

#### 5.9.1.2.2 Non-Grid Interconnected or Stand-Alone

All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of the most recent version of Underwriters Laboratory Standard 1703.

All non-grid interconnected or stand-alone systems shall be designed and installed to comply with the National Electric Code (NEC).

#### 5.9.1.3 Array Orientation and Tilt

Optimum array orientation is a 180° true bearing. However, the program accepts solar arrays oriented between South of due East and South of due West or between 80° and 260° true bearing. Systems installed between 260° and 80° true bearing or North of due East and North of due West are not eligible for a Green Energy Program Grant.

Optimum array tilt is equal to the latitude at the installation site. However, the program accepts array tilt parameters as specified by the module manufacturer which may allow for tilts greater than and less than latitude.

## 5.9.1.4 Array Shading

Photovoltaic arrays shall be installed such that the array has a minimum of six (6) hours of unobstructed sunshine daily inclusive of solar noon. A "solar window" of eight (8) hours of unobstructed sunshine is preferred.

The installing contractor is responsible for insuring that the system is free from shading. The installing contractor shall perform a "Solar Shade Analysis" on all installations and provide documentation for each grant application to ensure the array meets the minimum daily sunshine requirements. Results of the solar shade analysis must determine that 70% of the annual solar path's area is shade free to be considered for a grant.

#### 5.9.1.5 Aesthetics

Aesthetics must be considered in the design and mounting of the photovoltaic array. The designing contractor must provide a roof schematic complete with roof dimensions, array placement, orientation

Formatted: Font color: Black

Deleted: magnetic

Deleted: magnetic

and areas of shading to the Department prior to installation. The designing contractor must configure the modules in an aesthetically pleasing manner free from shading. The quality of the aesthetics shall be determined solely by the Department.

Deleted: make every attempt to

#### 5.9.2 Solar Water Heating

## 5.9.2.1 Grant Limits

Subject to availability of funds, the Delaware Green Energy Program offers grants for solar water heating systems installed by qualified contractors and customers up to 25% of the total installed cost. Grants will not exceed \$3,000 per residential dwelling for residential systems and \$30,000 per non-residential facility for non-residential systems. Qualifying State, County, Municipal and 501(c)3 entities will have opportunities to receive up to 35% grants in lieu of their abilities to capitalize on Federal tax credits. Applicants may apply multiple times for the same renewable energy system if each time the system is expanded in size. Applicants may apply multiple times for the same renewable energy system if each time the system is expanded in size. The GEP will fund expansions up to the total allowable fund limits per the customer's designation as either a residence or non-residence.

Solar water heating systems integrated into a radiant heating application are eligible for a grant up to 25% of the installed cost of the solar energy portion of the system. Grants will not exceed \$5,000 per residential dwelling for residential systems and \$30,000 per non-residential dwelling for non-residential systems.

## 5.9.2.2 Accepted Products and Equipment

A solar water heating system must be designed to reduce or eliminate the need for electric or gas heated water.

All qualifying residential solar water heating systems must be certified to meet the Solar Rating and Certification Corporation's (SRCC) OG-300, Operating Guidelines and Minimum Standards for Certifying Solar Water Heating Systems: An Optional Solar Water Heating System Certification and Rating Program and have a Freeze Tolerance Limit of minus 21 degrees Fahrenheit without electrical power.

All qualifying non-residential solar water heating systems and solar energy systems integrated into a radiant heating application must utilize collectors certified to meet the Solar Rating and Certification

Formatted: Font: (Default) Arial, 12 pt

Formatted: List Paragraph

Deleted: 50

Deleted: 250

Formatted: Font: (Default) Arial, 12 pt

Formatted: Font: (Default) Arial, 12 pt, Font color: Auto

Deleted: 50

Deleted: 250

Corporation's (SRCC) OG-100, Operating Guidelines for Certifying Solar Collectors only.

Non-residential solar water heating systems will be required to submit a detailed system design and a predicted performance calculation verified by a Professional Engineer (P.E.)

Solar Water Heating Systems integrated into Solar Pool Heating systems for any reason will not be eligible for funding.

#### 5.9.2.3 Collector Orientation and Tilt

Optimum collector array orientation is a 180° true bearing. However, the program accepts solar collectors oriented between South of due East and South of due West or between 80° and 260° true bearing. Systems installed between 260° and 80° true bearing or North of due East and North of due West are not eligible for a Green Energy Program Grant.

Optimum collector tilt is equal to the latitude at the installation site. However, the program accepts collector tilt parameters as specified by the collector manufacturer which may allow for tilts greater than and less than latitude.

## 5.9.2.4 Collector Shading

All collectors shall be installed such that the collector array has a minimum of six (6) hours of unobstructed sunshine daily inclusive of solar noon. A "solar window" of eight (8) hours of unobstructed sunshine is preferred.

The installing contractor is responsible for insuring that the system is free from shading. The installing contractor shall perform a "Solar Shade Analysis" on all installations and provide documentation for each grant application to ensure the array meets the minimum daily sunshine requirements. Results of the solar shade analysis must determine that 70% of the annual solar path's area is shade free to be considered for a grant.

#### 5.9.2.5 Aesthetics

Aesthetics must be considered in the design and mounting of the solar water heating collectors. The designing contractor must complete a roof schematic complete with roof dimensions, collector placement, orientation and areas of shading to the Department prior to installation. The designing contractor must configure the collectors in an

Deleted:

Formatted: Font color: Black

Deleted: magnetic

Deleted: magnetic

**Deleted:** make every attempt to

aesthetically pleasing manner. This shall be determined solely by the Department.

#### 5.9.3 Small Wind Turbines

#### 5.9.3.1 Grant Limits

Subject to availability of funds, the Delaware Green Energy Program offers incentives up to 25% for small grid-connected wind turbines installed by qualified contractors and customers. Small wind turbines shall be at least 500 Watts but no larger than 100 KW. The grant may be applied to (one) turbine per property. A grant for a qualifying wind turbine shall only include the cost of the wind turbine. Component parts including but not limited to the structural support pad and tower will not be included in the grant calculation. A qualifying wind turbine shall not exceed \$5.00 per Watt. If a system is found to be in excess of \$5.00 per watt the grant value will be totaled by multiplying the installed PTC wattage by \$5.00. The resulting cost will be considered the upper limit of cost eligibility for the project and then 25% multiplier will be applied to that amount in lieu of the provided proposal or final invoice cost. Grants will not exceed \$22,500 per residential dwelling for residential systems and \$100,000 per non-residential facility for non-residential systems. Qualifying State, County, Municipal and 501(c)3 entities will have opportunities to receive up to 35% grants in lieu of their abilities to capitalize on Federal tax credits.

## 5.9.3.2 Capacity Limits

Qualifying wind turbine systems shall be at least 500 Watts.

The Department may reject applications if the location of the proposed wind turbine system has an inadequate wind resource for reasonable utilization of the equipment as recommended by the turbine manufacturer. Wind resources can vary significantly; therefore, the contractor and customer must take care that the location has adequate wind for the turbine selected. As such funds for wind turbines will not be approved unless a specific site survey has been conducted at the proposed tower height for a minimum of 6 months to assess the available wind speed. Grants will not be made available for the site where the average wind speed collected from the (6) month data will not sustain at minimum the cut in speed requirements for the wind turbine. The Department may require additional evidence of feasibility prior to approving the grant.

#### 5.9.3.3 Accepted Products and Equipment

Deleted: 50

Deleted: of the total installed cost

**Deleted:** by a qualified contractor for a qualified customer.

**Deleted:** A qualifying wind turbine system shall not exceed \$5.00 per Watt installed.

**Deleted:** It is strongly recommended that a professional evaluation of your specific site be completed.

Deleted: reservation.

#### 5.9.3.3.1 Grid Interconnected

All qualifying grid-connected small wind systems must use Underwriters Laboratory listed equipment and comply with the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 929, Recommended Practice for Utility Interface of Photovoltaic (PV) Systems, IEEE 1547, Standard for Interconnecting Distributed Resources with the Electric Power Systems and the appropriate generation interconnection requirements of <a href="DP&L">DP&L</a> Power Delivery's, Technical Considerations Covering Parallel Operations of Customer Owned Generation of Less than <a href="QMegawatt">QMegawatt</a> and Interconnected with the <a href="DP&L">DP&L</a> Power Delivery System or similar interconnection requirements from a non-regulated electric supplier which is contributing to the Green Energy Fund.

All inverters or other systems used in interconnection must be certified by a nationally recognized testing laboratory for safe operation and be certified as meeting the requirements of Underwriters Laboratory Standards 1741, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems.

All grid interconnected systems must be designed and installed to comply with the National Electric Code (NEC).

Wind turbines, may only be considered eligible if they are also listed on the California Energy Commission

Emerging Renewables Program List of Eligible Small Wind Turbines
(http://www.consumerenergycenter.org/cgi-bin/eligible smallwind.cgi)

## 5.9.3.3.2 Non-Grid Interconnected or Stand-Alone

All qualifying non-grid interconnected wind systems must use Underwriters Laboratory certified listed equipment and systems shall be designed and installed to comply with the National Electric Code (NEC).

Wind turbines may only be considered eligible if they are also listed on the California Energy Commission

Emerging Renewables Program List of Eligible Small Wind Turbines (http://www.consumerenergycenter.org/cgi-bin/eligible smallwind.cgi)

5.9.4 Geothermal Heat Pump Systems

5.9.4.1 Grant Limits

Deleted: Conectiv

Deleted: 1

Deleted: Conectiv

Formatted: Heading 3, Left, Indent: Left:

Formatted: Font: (Default) Arial, 12 pt, Not

Francisco Francisco (Dafa II) A fall 42 al Al

Formatted: Font: (Default) Arial, 12 pt, Not

Formatted: Font: (Default) Arial, 12 pt, Not

Subject to availability of funds, the Delaware Green Energy Program offers grants for geothermal heat pump systems installed by qualified contractors and customers at the following rates:

#### Residential:

\$600 per ton not exceeding \$5,000 per residential dwelling for residential systems installed with an Energy Efficiency Ratio (EER) of 18.0 and Coefficient of Performance (COP) of 3.6 or greater or 50% of the installed cost whichever is lower, or

#### Non-residential:

\$600 per ton not exceeding \$25,000 per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 18.0 and Coefficient of Performance (COP) of 3.6 or greater or 50% of the installed cost whichever is lower, or

## 5.9.4.2 Accepted Products and Equipment

Qualifying geothermal heat pump systems must be sized in accordance with good heating, ventilation and air conditioning design practices for the occupancy, location and structure. Contractor shall provide a Manual J calculation, or other equivalent calculation, to determine proper size of equipment.

All qualifying systems must have a warranty for protection of the integrity and performance of the system for at least five years. All units installed under this program must have a minimum EER of 18,0 and COP of 3.6. Qualifying systems must meet the following:

Closed loop systems shall qualify under rating conditions in accordance with ISO 13256-1.

Open loop systems shall qualify under rating conditions in accordance with ISO 13256-1.

DX systems shall qualify under rating conditions in accordance with ARI 870.

## 5.9.5 Fuel Cells

5.9.5.1 Grant Limits

Deleted: 3

Deleted: 15.0

Deleted: 4

**Deleted:** \$500 per ton not exceeding \$2500 per residential dwelling for residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or 50% of the installed cost whichever is lower

Deleted: 15.0

Deleted: 4

**Deleted:** \$500 per ton not exceeding \$25,000 per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or 50% of the installed cost whichever is lower.¶

Deleted: 4

Deleted: 0

Subject to availability of funds, the Delaware Green Energy Program offers grants for grid-connected fuel cells installed by qualified contractors and customers up to 25% of the total installed cost for fuel cell systems operating on a renewable fuel source. Grants will not exceed \$22,500 for residential systems and \$30,000 for non-residential systems.

Deleted: 50

Deleted: 250

## 5.9.5.2 Accepted Products and Equipment

#### 5.9.5.2.1 Grid Interconnected

All Qualifying fuel cells systems must utilize a renewable fuel source and meet the National Fire Protection Association (NFPA) 853 for Stationary Fuel Cell Power Plants, the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 519-Recommended Practices and Requirements for Harmonic Control in Electric Power Systems, the most current version of the American National Standards Institute (ANSI) Z21.83 for Fuel Cell Power Plants, and input and output protection functions should be in compliance with ANSI C37.2 Device Function Number Specifications.

All grid interconnected systems must be designed and installed to comply with the National Electric Code (NEC).

## 5.9.5.2.2 Non-Grid Interconnected or Stand-Alone

All non-grid interconnected or stand-alone systems shall be designed and installed to comply with the National Electric Code (NEC).

## 5.10 Energy Efficiency Information Programs

Subject to availability of funds, the Delaware Green Energy Endowment Program offers grants for energy efficiency information programs.

Energy Efficiency Information Programs must be submitted to the Department in the form of a proposal. Proposals will be requested by the Department as needed to address specific energy education requirements, or may be submitted unsolicited. The total of all grants awarded under the Green Energy Endowment Program for Energy Efficiency Education Programs shall not exceed thirty percent (30%) of the allowable expenditures for the Green Energy Endowment Fund.

To be eligible for consideration, an Energy Efficiency Information Program must encourage energy efficiency improvements through education, information, or promotion. Proposals may target groups of consumers, using outreach, communications, technical support, or analytical resources.

Energy Efficiency Information Programs may include residential or nonresidential customers.

Newly available energy efficiency technologies or novel applications of available energy efficiency technologies may be included in Energy Efficiency Information Programs to the extent necessary to demonstrate their capabilities and their environmental and economic advantages.

Energy Efficiency Information Programs must include plans to make available and broadly disseminate information to the targeted consumers. Quantifiable goals including estimated annual energy savings, numbers of people or organizations reached, and environmental impacts, must also be included. Other goals may include measurable market transformation indicators, such as penetration of new, high efficiency products into the market place.

Energy Efficiency Information Programs are not intended to provide equipment rebates or funding for technology development. The Department will not provide funding for technology development, general facility or equipment upgrades, or facility renovations.

## 5.11 Delaware Solar Schools Program

Solar Energy Curriculum Program. -- The Solar Energy Curriculum Program shall provide cash grants from the Green Energy Fund to high schools in Delaware that are Delmarva Power customers and that create a course, or curriculum, that teaches the science, economics, policy, and hands-on installation of solar photovoltaic technology. Grants made under this program shall provide 100% funding for the installation of a solar photovoltaic system to be used as part of the qualifying school's solar energy curriculum. Total funding may not exceed \$10,000 per school for solar equipment only, and shall not prevent the school from participating in the Green Energy Endowment Program. Green Energy Fund dollars committed to such installations shall not exceed \$100,000 per year total. The Energy Office shall establish appropriate curriculum eligibility criteria before awarding any such grants.

## 5.12 Solar Energy Curriculum Program Requirements

Reserved

Formatted: Indent: First line: 0.16"

#### 6.0 Technology Demonstration Program

6.1 General Provisions

Deleted: The

Subject to the availability of funds, the Green Energy Fund's Technology Demonstration Program provides grants to projects that demonstrate the market potential for new renewable energy and energy efficiency technologies and accelerate the commercialization of these technologies in Delaware.

Technology Demonstration Program proposals will be accepted by the Department on a biannual basis. The total of all grants awarded under the Technology Demonstration shall not exceed twenty-five percent (25%) of all revenue collected for the Green Energy Fund during the previous fiscal year or 25% of the fund balance whichever is greater.

To be eligible for consideration, a project must demonstrate a commercially available technology. Research and Development projects will not be funded under the Technology Demonstration Program. To be eligible for consideration, a project must demonstrate either a novel technology or a novel application of an available technology. Projects must include a public education component, such as integration into an educational program or location at a facility that allows public tours of the installed renewable energy technology.

The Delaware Technology Demonstration Program grants are available to applicants located within the State of Delaware for projects conducted in the State of Delaware.

Under no circumstances will the Department issue grants for land acquisition in association with any project proposed in the Technology Demonstration Program.

The Delaware Technology Demonstration Program will not accept projects that cannot be completed in one (12) month calendar year from the receipt of payment of the first invoice. If a Technology Demonstration Project fails to complete its work in one calendar year the applicant may request in writing for up to a (6) month extension. Only one extension will be granted per project. If an extension is requested Department will detail at that time what documentation must be provided to approve an extension. If an extension is not granted the applicant will return all unexpended grant funds to date and will provide a final report within (60) days of notice of the extension and still has not completed its project work, the applicant will return all unexpended grant funds to date and will provide a final report within (60) days of notice of the extension denial.

All grant applicants must acknowledge and agree that they understand the Delaware Freedom of Information Act (FOIA) regulations and will comply.

#### 6.2 Grant Limits

Subject to availability of funds, the Green Energy Fund's Technology Demonstration Program offers grants to projects that demonstrate the market potential of renewable energy technology in Delaware. Individual grants shall not exceed twenty-five percent (25%) of the cost of the eligible equipment for a renewable energy technology project and will not exceed \$200,000 per project. In all cases, the cost of the eligible equipment shall include only the costs of labor, overhead expenditures, equipment, materials, and subcontractors incurred during the performance of the Technology Demonstration Program contract. Expenditures made prior to contract award are not eligible. The Department may also set a limit to the amount of overhead expenditures as a matter of percentage of total project.

**Deleted:** Grants for biodiesel manufacturing facilities shall not exceed twenty-five percent (25%) of the project cost and no one project may receive more than \$300,000.¶

## 6.3 Code Compliance

All Technology Demonstration Program projects must be installed in accordance with the standards and specifications of the manufacturers of the components in the system and in compliance with all applicable local electric, plumbing, and building codes and local ordinances to be considered for application.

## 6.4 Permits

All Technology Demonstration Program projects must obtain all relevant permits from the Delaware Department of Natural Resources and Environmental Control, other necessary state, local, regional, and federal permits to be considered for application.

## 6.5 Application Process

Technology Demonstration Program proposals <u>may</u> be accepted on a biannual basis. Applicants for the Technology Demonstration Program shall submit their proposals and supporting information in accordance with Requests for Proposals issued by the Department. Applicants must receive approval prior to beginning the project.

The Department reserves the right to reject any or all proposals if the information provided is inadequate or incomplete.

#### 6.6 Distribution of Technology Demonstration Grants

The Department will process the invoices from the grant recipient in accordance with contract terms. Invoices may require supporting

Deleted: will

documentation including, but not limited to, hours worked, receipts for expenditures and a brief progress report.

#### 6.7 Accepted Products and Equipment

All Technology Demonstration Program projects interconnecting with the utility grid must comply with the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 929, Recommended Practice for Utility Interface of Photovoltaic (PV) Systems and the appropriate generation interconnection arrangement of DP&L's, Technical Considerations Covering Parallel Operations of Customer Owned Generation of Less than 1 Megawatt and Interconnected with the DP&L System or a similar document from a non-regulated electric supplier.

All inverters must be certified by a nationally recognized testing laboratory for safe operation as well as be certified as meeting the requirements of Underwriters Laboratory Standards 1741-1999, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems.

## 6.7.1 Photovoltaic Systems

Photovoltaic projects located in Delaware use photovoltaic electricity <u>for a</u> novel or innovative use of photovoltaic design are eligible to receive a grant under the Technology Demonstration Program.

## 6.7.2 Solar Thermal

Solar thermal projects located in Delaware that use solar thermal energy to produce electricity, replace or substitute the need for non-renewable fuel, or includes a novel or innovative use of solar thermal design is eligible to receive a grant under the Technology Demonstration Program.

#### 6.7.3 Small Wind Turbines

Small wind turbine projects located in Delaware may apply for a grant under the Technology Demonstration Program.

#### 6.7.4 Fuel Cells

Fuel cell projects located in Delaware using a renewable energy fuel source may apply for a grant under the Technology Demonstration Program.

# 6.7.5 Hydroelectric Generators

**Deleted:** to replace or substitute the need for non-renewable fuel, or include a

Deleted: or non-renewable

Hydroelectric projects located in Delaware and placed at existing dams or in free-flowing waterways may be eligible for a grant under the Technology Demonstration Program.

#### 6.7.6 Storage, Conversion and Conditioning Equipment

Storage, conversion and conditioning equipment, for use with renewable energy products that include a novel or innovative use of storage, conversion and conditioning equipment may be eligible to receive a grant under the Technology Demonstration Program.

## 6.7.7 Passive Solar Design

Passive solar designs that implement novel or innovative passive solar products may be eligible to receive a grant under the Technology Demonstration Program. Grants for passive solar projects shall not exceed 25% of the installed cost of the project up to a maximum of \$3000 per residential dwelling for residential projects and \$20,000 per non-residential facility for non-residential projects.

The project shall meet the requirements in Section 6.1 and provide a costeffectiveness analysis and a Manual J calculation or equivalent that demonstrates the estimated energy impact expected over the industry standards that provide a similar function.

## 6.7.9 Energy Efficiency Technologies, Processes and Practices

New energy efficiency technologies are eligible for grants under the Technology Demonstration Program. To be eligible for funding, the applicant must demonstrate that a measurable improvement in energy efficiency can be achieved in comparison to conventional technologies, processes and practices, and that the proposed equipment or approach is not widely available or in use.

#### 7.0 Research and Development Program

## 7.1 General Provisions

Subject to availability of funds, the Green Energy Fund's Research and Development Program offers grants to projects that develop or improve Renewable Energy Technology in Delaware. The Department will accept proposals for Research and Development Program grants for qualifying projects that improve the engineering, adaptation, or development of products or processes that directly relate to renewable energy technology.

**Deleted:** 6.7.8 Biodiesel Manufacturing Facilities¶

Biodiesel manufacturing facilities located in Delaware may apply for a grant under the Technology Demonstration Program

Deleted: will

Research and Development Program proposals <u>may</u> be accepted by the Department on a biannual basis. The total of all grants awarded in any one fiscal year shall not exceed ten percent (10%) of all revenue collected for the Green Energy Fund during the previous fiscal year or 10% of the fund balance whichever is greater.

Subject to the future availability of funds, the Department will consider multiyear projects in the Research and Development Program. Proposals seeking grants for multi-year projects shall not exceed fifty percent (50%) of the total annual funds available in the Research and Development Program.

The Delaware Research and Development Program grants are available to applicants located within the State of Delaware for projects conducted in the State of Delaware. Under no circumstances will the Department issue grants for land acquisition in association with any project proposed in the Research and Development Program.

The Delaware Research and Development Program may not accept projects that cannot be completed in one (12) month calendar year from the receipt of payment of the first invoice. If a Research and Development Project fails to complete its work in one calendar year the applicant may request in writing for up to a (6) month extension. Only one extension will be granted per project. If an extension is request Department will detail at that time what documentation must be provided to approve an extension. If an extension is not granted the applicant will return all unexpended grant funds to date and will provide a final report within (60) days of notice of the extension and still has not completed its project work, the applicant will return all unexpended grant funds to date and will provide a final report within (60) days of notice of the extension denial.

All grant applicants must acknowledge and agree that they understand the Delaware Freedom of Information Act (FOIA) regulations and will comply.

## 7.2 Grant Limits

Subject to availability of funds, the Research and Development Program offers grants up to thirty-five percent (35%) of the cost of qualifying projects. Research and Development Program grants shall not exceed \$250,000 per project. Cost of qualifying projects shall include only the costs of labor, overhead expenditures, equipment, materials, and subcontractors incurred during the performance of the contract. Expenditures made prior to contract award are not eligible.

#### 7.3 Application Process

The following describes the general approach envisioned for these projects. Alternative approaches to achieve the desired results may be considered, provided that the work scope is complete, addresses all of the technical issues, and has a convincing chance for success.

Applicants are to propose projects and tasks that address all issues described in Section 7.1 with care taken to emphasize the unique application advantages and environmental benefits that will result from the proposed project. The proposal should clearly define why this project is an improvement over existing products that provide a similar function.

Research and Development Program proposals <u>may</u> be accepted on a biannual basis. Applicants for the Research and Development Program shall submit their proposals and supporting information in accordance with Requests for Proposals issued by the Department. Applicants must receive approval prior to beginning the project.

Applications will be reviewed by a committee established by the Department. The Department will determine the eligibility for a grant and will, in particular, the eligible costs in 7.2. A statement of reservation of funds and authorization to proceed will be issued by the Department upon completion and acceptance of contract terms.

## 7.4 Acceptable Projects

The Department will accept proposals for Research and Development Program grants for qualifying projects that improve the engineering adaptation, or development of products that directly relate to renewable energy and energy efficiency technologies. The Department reserves the right to reject any or all proposals if the information provided is inadequate or incomplete.

Applicants are to propose projects and tasks that address all issues described in Section 7.1 with care taken to emphasize the unique application advantages and environmental benefits that will result from the proposed project. The proposal should clearly define why this project is an improvement over existing products that provide a similar function.

# 8.0 Evaluation of Technology Demonstration and Research and Development Applications

#### 8.1 Compliance Review

**Deleted:** Subject to the future availability of funds, the Department will consider multi-year projects in the Research and Development Program. Proposals seeking grants for multi-year projects shall not exceed fifty percent (50%) of the total annual funds available in the Research and Development Program.¶

Deleted: will

Proposals submitted under the Technology Demonstration and Research and Development Programs will receive a thorough compliance review. A compliance review will be performed to check the proposal package for its compliance with the requirements of the Department's Requests for Proposals and the requirements outlined in Sections 6 and 7. The Department will determine the eligibility for a grant and will, in particular, consider the education requirements in 6.1 and the eligible costs in 6.2 and 7.2.

The Department reserves the right to void an application if the information requested is not received within the prescribed timeframe when requested or is inadequate or incomplete.

A statement of reservation of funds and authorization to proceed will be issued by the Department upon completion and acceptance of contract terms.

#### 8.2 Evaluation Committee

All applications that fulfill the minimum application requirements, as determined under the compliance review, will be eligible for comprehensive evaluation. The comprehensive evaluation of proposals will be performed by the Department and a committee designated by the Department. In evaluating applications, the Department reserves the right to use any assistance deemed advisable, including qualified personnel from federal agencies, other government entities, universities, industry, and contractors. The Department will make every effort to use unbiased individuals and experts on the review committee. These individuals will be required to protect the confidentiality of any specifically identified trade secrets and/or privileged or confidential commercial or financial information obtained as a result of their participation in this evaluation.

The reviewers and their employers, employees, affiliates, and members shall excuse themselves from proposing projects under the Research and Development or Technology Demonstration Programs for the funding period during which they are serving on the reviewing committee.

## 8.3 Notification

All applicants will be notified in writing of the action taken on their applications. Applicants should allow at least 90 days for the Department evaluation. The status of any application during the evaluation and selection process will not be discussed with the applicant or any of its partners. Unsuccessful application will receive a letter summarizing the committee's decision. Unsuccessful applications will not be returned to applicants. There may not be an opportunity for a debriefing of applications.

#### 8.4 Grant Award

If upon completion of the Comprehensive Evaluation, the review committee finds that the proposed project fits the criteria of the Technology Demonstration or Research and Development Programs, then a statement of reservation of funds and authorization to proceed will be issued by the Department.

All recipients of grants may be required to participate in mandatory evaluation meetings on a periodic basis. During each evaluation meeting, the results to date and future plans for the project will be presented by the Recipient to an evaluation panel selected by the Department. The results of each evaluation may be used by the Department to determine whether the project will continue to receive funding. Applicants should assume that at least two meetings per year will be required for evaluation and that up to two additional review meetings may be held at the applicant's location.

#### 8.5 Payment for Work Performed

The Department will process the invoices from the grant recipient usually within 30 days of receipt of invoice and supporting documentation. Supporting documentation shall include but not limited to hours worked, receipts for expenditures and a brief progress report. Additional documentation and reporting requirements may be necessary depending on the nature and duration of the work performed.

## 9.0 Proprietary Application Information

Applicants are hereby notified that the Department intends to make all applications submitted available to non-State personnel for the sole purpose of assisting in its evaluation of the applications. These individuals will be required to protect the confidentiality of any specifically identified proprietary information obtained as a result of their participation in the evaluation.

Proposals submitted may contain trade secrets and/or privileged or confidential commercial or financial information which the applicant does not want to be used or disclosed for any purpose other than evaluation of the application. The use and disclosure of such data may be restricted, provided the applicant follows the Department's "Request for Confidentiality" procedure contained in the Department's "Freedom of Information Act" or "FOIA" regulation. It is important to understand that this FOIA regulation's confidentiality procedure is a necessary part of this regulation in that any information submitted to the Department is subject to public review unless deemed to be confidential by the Secretary in accordance with the criteria and procedures established in the FOIA regulation.

The burden lies with the applicant asserting the claim of confidentiality to meet the criteria established in the FOIA regulation.

## 10.0 Severability

If any section, subsection, paragraph, sentence, phrase or word of these regulations is declared unconstitutional by a court of competent jurisdiction, the remainder of these regulations shall remain unimpaired and shall continue in full force and effect, and proceedings there under shall not be affected.

8 DE Reg. 114 (07/01/04)

